

AGRI FOOD CROPS

**PROCESSING,
VALUE ADDITION,
PACKAGING
& STORAGE**

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SIVAKUMAR, P.S.**



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(Processing, Value Addition, Packaging & Storage)

by

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FOREWORD

India is the second largest producer of food in the World next to China, which caters to the food needs of over 120 crore people everyday. The food processing industry is one of the largest industries in India ranking fifth in terms of production, consumption and export. Despite being the largest food producer, only 6% of the perishable commodities produced in our country are converted into value added products. The Ministry of Food Processing, Govt., of India envisaged an increase in processing level of perishable commodities from 6% to 12%, value addition from 20% to 35% and increase in India's share in global food from 1.5% to 3% by 2015 and is directing its efforts to achieve these levels.

With the rapid increase in per capita income and purchasing power along with increased urbanization, improved of living, the consumers are able to spend substantial amount on processed foods. Currently, it is estimated that over 300 million upper and middle class people regularly consume the processed food. The growing number of nuclear families and increasing levels of double income families have created a need for convenience foods too especially the urban Indians. Realizing this trend, several Indian and Multi-national companies offer a variety of ready-to-cook and ready-to-eat products which can save time and effort spent in cooking. Indigenous foods like *idli*, *dosa*, *roti*, *upma*, *halwa* etc. are also made into ready-to-eat from which slowly catching up the urban food market.

Diet-related, non-communicable disease like obesity, coronary heart disease are also in the rise due to sedentary life styles especially among urban Indians. This situation created a sense of vulnerability among urban Indians and most of them are now becoming health conscious and started consuming healthy functional foods. The Indian health food market is growing at 25-30% annually and expected to double in the few years.

Despite achieving huge strides in the convenience and health food development that resulted in an array of innovative products, there are very few books in the market that can provide comprehensive information on these specialized food categories. The book written by Mr. R. Sasi Kumar and Dr. P. Sethuraman Sivakumar entitled “Agri Food Crops ” provides a comprehensive account on the preparation and production convenience of healthy food products. Besides, the book elaborates on the post-production aspects like sensory evaluation and marketing that are essential for success of these foods in the competitive Indian market. A chapter on preparing projects for bankable food products can help the prospective entrepreneurs to seek funding from credit Institutions to establish food industries in their area.

I congratulate both the authors for their commendable work by compiling valuable information into a readable text book. I hope this book will serve as a valuable text book for students, teachers and scientists of Food Technology, Postharvest Technology, Food Processing & Preservation, Home Science and allied courses at the Graduate and Post Graduate levels.

A handwritten signature in black ink, appearing to be 'D.P. Ray', with a date '28/12/11' written below it.

(D.P. Ray)

PREFACE

The book is written to meet the needs of students of Indian Agricultural Universities pursuing courses in Food Technology, Postharvest Technology, Food Processing & Preservation, Home Science and allied courses, at the graduate and post graduate levels. The book currently used as text and reference books, mostly written by western authors, do not satisfy the needs of Indian students, which are important in ours. Our book eliminates this imbalance

The production, storage, processing and utilization of agro based food crops are discussed in details from the Indian context. Convenience and Health food products from cereals and millets, pulses and oilseeds, fruits and vegetables and milk based food products like idli, dosa, chapti, fruit juice, ready soup mix and milk based products have received special attention. Convenience and health foods from different source, which are important to overcome malnutrition of infant and young children of developing countries like India, are considered. Indian food laws and the role of Indian Standards Institute in regulation of food standards are discussed while production of convenience and health foods.

The book gives a comprehensive account of preparation and production convenience and health food products. It consists of 12 chapters, deal with available of local Agro based food crops resource, for producing and developing into various convenience food products, includes standard procedure, formulation and development of value added products from different combination. Chapter 12 deals Project preparation, how the local people can start food related project using local available resource, includes minimum financial requirements, fund allocation into different heads and judging a feasible project.

We trust that the book would be of interest to all students and scientists working in the field of Food Industry, Food processing and Preservation related research institutes. Suggestions for improvements of the book are welcome.

The authors wish to convey their grateful thanks to Dr.P.Banumathi, Dean, Home Science College & Research Institute, Tamil Nadu Agricultural University, Madurai, Tamil Nadu, India for writing the Foreword. Our special thanks to Dr.Kanchana, Associate Professor, Home Science College and Research Institute, Tamil Nadu Agricultural University, Madurai, Dr.J.T.Sheriff, Principle Scientists (Process Engineering), Central Tuber Crop Research Institute, ICAR, Thiruvananthapuram, Kerala, India and Prof.Basanti Baroova, Head, Department of Food and Nutrition, Assam Agricultural University, Jorhat, Assam, for help at various stages of the preparation of the manuscript.

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The book deals with value addition and processing of agro-food crops. Each agro-food crop is discussed from the point of its production, processing, value addition, packaging and storage. Main food crops of special importance in the food processing sector like cereals, millets and pulses, minor forest products, fruits and vegetables and milk and milk based products are considered at length.

The book gives a comprehensive account of food processing and value addition with regards to encourage for setting up small food processing industries in their local area using local agro food crops base. Indigenous food preparations based on fermented cereals and pulse, milk and other crops based products have been discussed. Various food laws and regulation by the Government to control food quality and standards are highlighted. Agro food based, food processing industry, in small or cottage scale level in their local region with available resource projects are also discussed in details.

An outstanding text for students, researchers and entrepreneurs in food processing with little or no previous instruction in food science and technology, food science is also a valuable reference for professionals in food processing, as well as for those working in fields that serves, regulates or otherwise interfaces with the food processing industry.

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